

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

COPY

Applicant(s): Yoshinaga

Serial No.: 09/890,729

Group Art Unit No.: Unknown

Filed: January 27, 2000

Examiner: Unknown

For: Polypeptides Involved in Immune Response

Docket No.: A-579 B

INFORMATION DISCLOSURE STATEMENT

Assistant Commissioner for Patents  
Washington, D.C. 20231

Sir:

As a means of complying with the duty of disclosure, applicant submits a "List of References Cited by Applicant" on a modified PTO-1449 form and provides a copy of each of the listed references for consideration by the Examiner.

The information disclosure statement submitted herewith is being filed within three months of the filing date of the application or date of entry into the national stage of an international application or before the mailing date of a first Office action on the merits, or before the mailing of a first Office action after the filing of a request for continued examination under section 1.114, whichever event occurs last. 37 CFR 1.97(b).

Applicant requests consideration of this information and passage of the application to issue.

The Commissioner is hereby authorized to charge any filing fees which may be required or credit any overpayment to Deposit Account No. 01-0519 in the name of Amgen Inc.

Respectfully submitted,

Robert B. Winter  
Attorney/Agent for Applicant(s)  
Registration No.: 34, 458  
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Date:

Please send all future correspondence to:

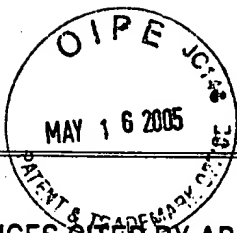
US Patent Operations/RBW  
Dept. 4300, M/S 27-4-A  
AMGEN INC.  
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**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to the Assistant Commissioner for Patents, Box 18, Washington, DC 20231, on the date appearing below.

Date

November 2, 2001  
Signature



Modified Form PTO-1449

# LIST OF REFERENCES CITED BY APPLICANT

(Use several sheets if necessary)

Atty. Docket No.	A-579 B	Serial No.	09/890,729
Applicant Yoshinaga			
Filing Date	January 27, 2000	Group	Unknown

## U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	AA	3,773,919	11/20/73	Boswell et al			
	AB	4,816,567	3/28/89	Cabilly et al.			
	AC	4,892,538	1/9/90	Aebischer et al.			
	AD	4,970,154	11/13/90	Chang			
	AE	5,011,472	4/30/91	Aebischer et al.			
	AF	5,106,627	4/21/92	Aebischer et al.			
	AG	5,593,875	1/14/97	Wurm et al.			
	AH	5,653,975	8/5/97	Baetge et al.			
	AI	5,676,954	10/14/97	Brigham			

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	TRANSLATION	
							YES	NO
	BA	EP 0 036 676	9/19/90	EPO			X	
	BB	EP 0 058,481	10/1/86	EPO			X	
	BC	EP 0 088 046	12/9/87	EPO				X
	BD	EP 0 133 988	3/13/85	EPO				X
	BE	EP 0 143 949	10/12/88	EPO			X	
	BF	EP 0 154 316	9/13/89	EPO			X	
	BG	EP 0 401 384	3/13/96	EPO			X	
	BH	WO 91/10425	7/25/91	WIPO			X	
	BI	WO95/11308	4/27/95	WIPO			X	
	BJ	WO 96/40958	12/19/96	WIPO			X	
	BK	WO 98/38216	9/03/98	WIPO			X	
	BL	WO 99/15553	4/01/99	WIPO			X	
	BM	EP 1 125 585	8/22/01	EPO			X	

EXAMINER:

Date Considered:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>Modified Form PTO-1449</b>  <b>LIST OF REFERENCES CITED BY APPLICANT</b>  (Use several sheets if necessary)	Atty. Docket No.	Serial No.
	A-579 B	09/890 729
	Applicant	
	Yoshinaga	
	Filing Date	Group
	January 27, 2000	Unknown

EXAMINER'S  
INITIALS**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

CA	Altschul et al., "Basic Local Alignment Search Tool", J. Mol. Biol. <u>215</u> , 403-410 (1990)
CB	Aruffo and Seed, "Molecular cloning of a CD28 cDNA by a high-efficiency COS cell expression system", Proc. Natl. Acad. Sci. <u>84</u> , 8573-8577 (1987)
CC	Ausubel et al., Current Protocols in Molecular Biology, Green Pub. and Wiley and Sons, NY (1994) TABLE OF CONTENTS
CD	Brunet et al., "A new member of the immunoglobulin superfamily--CTLA-4", Nature <u>328</u> , 267-270 (1987)
CE	Carillo et al., "The Multiple Sequence Alignment Problem in Biology", SIAM J. Applied Math. <u>48</u> , 1073 (1988)
CF	Dariavach et al., "Human Ig superfamily CTLA-4 gene: chromosomal localization and identity of protein sequence between murine and human CTLA-4 cytoplasmic domains", Eur. Jour. Immun. <u>18</u> , 1901-1905 (1988)
CG	Dayhoff et al., "A Model of Evolutionary Change in Proteins", Atlas of Protein Sequence and Structure, vol. 5, supp. 3 (1978)
CH	Devereux et al., "A comprehensive set of sequence analysis programs for the VAX", Nucleic Acids Research <u>12</u> (1), 387 (1984)
CI	Engels et al., "Gene Synthesis", Angew. Chem. Intl. Ed. <u>28</u> , 716-734 (1989)
CJ	Eppstein et al., "Biological activity of liposome-encapsulated murine interferon $\gamma$ is mediated by a cell membrane receptor", Proc. Natl. Acad. Sci. USA, <u>82</u> , 3688-3692 (1985)
CK	Francis, "Protein modification and fusion proteins", Focus on Growth Factors <u>3</u> , 4-10 (1992)
CL	Freeman et al., "B7, a New Member of the Ig Superfamily with Unique Expression on Activated and Neoplastic B Cells", J. Immunology <u>143</u> , 2714-2722 (1989)
CM	Freeman et al., "Structure, Expression, and T Cell Costimulatory Activity of the Murine Homologue of the Human B Lymphocyte Jour. Expt. Med. <u>174</u> , 625-31 (1991)
CN	Freeman et al., "Murine B7-2, an Alternative CTLA4 Counter-receptor that Costimulates T Cell Proliferation and Interleukin 2 Production", Jour. Expt. Med. <u>178</u> , 2185-2192 (1993)
CO	Freeman et al., "Cloning of B7-2: A CTLA-4 Counter-Receptor That Costimulates Human T Cell Proliferation", Science <u>262</u> , 909-911 (1993)
CP	Gennaro, Remington's Pharmaceutical Sciences, 18th Edition, ed., Mack Publishing Company (1990) TABLE OF CONTENTS
CQ	Gribskov et al., Sequence Analysis Primer, eds., M. Stockton Press, New York, 1991 TABLE OF CONTENTS
CR	Griffin et al., Computer Analysis of Sequence Data, Part 1, eds., Humana Press, New Jersey, 1994 TABLE OF CONTENTS
CS	Gross et al., "The Murine Homologue of the T Lymphocyte Antigen CD28", J. Immun. <u>144</u> , 3201-3210 (1990)
CT	Henikoff, "Amino acid substitution matrices from protein blocks", PNAS, USA <u>89</u> , 10915-10919 (1992)
CU	Hoogenboom et al., "By-passing Immunisation", J. Mol. Biol. <u>227</u> , 381 (1991)
CV	Houghten et al., "General method for the rapid solid-phase synthesis of large numbers of peptides: Specificity of antigen-antibody interaction at the level of individual amino acids", Proc Natl Acad. Sci. USA <u>82</u> , 5132 (1985)
CW	Hutloff et al., "ICOS is an inducible T-cell co-stimulator structurally and functionally related to CD28", Nature <u>397</u> , 263-266 (1999)
CX	Jakobovits et al., "Germ-line transmission and expression of a human-derived yeast artificial chromosome", Nature <u>362</u> , 255-258 (1993)
CY	Jakobovits et al., "Analysis of homozygous mutant chimeric mice: Deletion of the immunoglobulin heavy-chain joining region blocks B-cell development and antibody production", Proc. Natl. Acad. Sci. <u>90</u> , 2551-2555 (1993)

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Modified Form PTO-1449

**LIST OF REFERENCES CITED BY APPLICANT**

(Use several sheets if necessary)

Atty. Docket No.

A-579 B

Serial No.

09/890 729

Applicant

Yoshinaga

Filing Date

January 27, 2000

Group

Unknown

EXAMINER'S  
INITIALS**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

CZ	Jones et al., "Replacing the complementarity-determining regions in a human antibody with those from a mouse", <i>Nature</i> <u>321</u> , 522-525 (1986)
DA	Kitts et al., "A Method for Producing Recombinant Baculovirus Expression Vectors at High Frequency", <i>Biotechniques</i> <u>14</u> , 810-817 (1993)
DB	Langer et al., "Biocompatibility of polymeric delivery systems for macromolecules", <i>J. Biomed. Mater. Res.</i> <u>15</u> , 167-277 (1981)
DC	Langer, "Controlled release of macromolecules", <i>Chem. Tech.</i> <u>12</u> , 98-105 (1982)
DD	Lesk, <i>Computational Molecular Biology</i> , ed., Oxnard University Press, New York (1998) TABLE OF CONTENTS
DE	Lucklow, "Baculovirus systems for the expression of human gene products", <i>Curr. Opin. Biotechnol.</i> <u>4</u> , 564-572 (1993)
DF	Lucklow et al., "Efficient Generation of Infectious Recombinant Baculoviruses by Site-Specific Transposon-Mediated Insertion of Foreign Genes into a Baculovirus Genome Propagated in <i>Escherichia coli</i> ", <i>J. Virol.</i> <u>67</u> , 4566-4579 (1993)
DG	Marks et al., "By-passing Immunization Human Antibodies from V-gene Libraries Displayed on Phage", <i>J. Mol. Biol.</i> <u>222</u> , 581 (1991)
DH	Marston et al., "Solubilization of Protein Aggregates", <i>Meth. Enz.</i> <u>182</u> , 264-275 (1990)
DI	McDonald et al., "Isolation of RNA Using Guanidinium Salts", <i>Meth. Enzymol.</i> <u>152</u> , 219 (19987)
DJ	Merrifield, "Solid Phase Peptide Synthesis. I. The Synthesis of a Tetrapeptide", <i>J. Am. Chem. Soc.</i> <u>85</u> , 2149 (1963)
DK	Morrison et al., "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", <i>Proc. Natl. Acad. Sci.</i> <u>81</u> , 6851-6855 (1985)
DL	Neddelmen et al., "A General Method Applicable to the Search for Similarities in the Amino Acid Sequence of Two Proteins", <i>J. Mol. Biol.</i> <u>48</u> , 443-453 (1970)
DM	Ogden et al., "Electrophoresis in Agarose and Acrylamide Gels", <i>Meth. Enzymol.</i> <u>152</u> , 61 (1987)
DN	Riechmann et al., "Reshaping human antibodies for therapy", <i>Nature</i> <u>332</u> , 323-327 (1988)
DO	Sambrook et al., <i>Molecular Cloning: A Laboratory Manual</i> , Cold Springs Harbor Laboratory Press, Cold Springs Harbor, NY (1989) TABLE OF CONTENTS
DP	Sidman et al., "controlled Release of Macromolecules and Pharmaceuticals from Synthetic Polypeptides Based on Glutamic Acid", <i>Biopolymers</i> <u>22</u> , 547-556 (1983)
DQ	Smith, et al., <i>Biocomputing: Informatics and Genome Projects</i> , Academic Press, New York, 1993 TABLE OF CONTENTS
DR	Steward and Young, <i>Solid Phase Peptide Synthesis</i> , Pierce Chemical Co., Rockford, IL (1984) TABLE OF CONTENTS
DS	Verhoeyen et al., "Reshaping Human Antibodies: Grafting an Antilysozyme Activity", <i>Science</i> <u>239</u> , 1534-1536 (1988)
DT	von Heinje, <i>Sequence Analysis in Molecular Biology</i> , Academic Press, (1987) TABLE OF CONTENTS

EXAMINER:

Date Considered:

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.



Customer Number: 22,852  
Attorney Docket No. 6843.0050-04000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Steven K. YOSHINAGA

Application No.: 09/890,729

Filed: August 3, 2001

For: POLYPEPTIDES INVOLVED  
IN IMMUNE RESPONSE

Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), Applicant brings to the attention of the Examiner the documents listed on the attached Form PTO 1449. This Information Disclosure Statement is being filed, to the undersigned's knowledge, before the mailing date of a first Office Action on the merits for the above-referenced application.

Each document listed on the attached Form PTO 1449 was cited in a communication in a counterpart Patent Cooperation Treaty application, and this Information Disclosure Statement is being filed within three months of the mailing date printed on that communication.

Copies of the listed documents are attached.

Applicant respectfully requests that the Examiner consider the listed documents and indicate that they were considered by making appropriate notations on the attached form.

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This submission does not represent that a search has been made or that no better art exists and does not constitute an admission that each or all of the listed documents are material or constitute "prior art." If the Examiner applies any of the documents as prior art against any claim in the application and Applicants determine that the cited documents do not constitute "prior art" under United States law, Applicant reserves the right to present to the office the relevant facts and law regarding the appropriate status of such documents.

Applicant further reserves the right to take appropriate action to establish the patentability of the claimed invention over the listed documents, should one or more of the documents be applied against the claims of the present application.

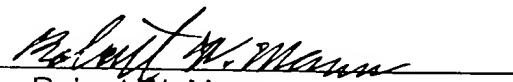
If there is any fee due in connection with the filing of this Statement, please charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: February 5, 2003

By:



Robert W. Mann

Reg. No. 48,555

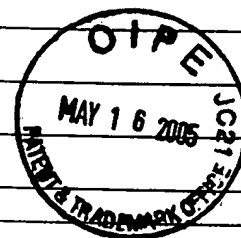
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# INFORMATION DISCLOSURE CITATION

OMB No. 0651-0011

Atty. Docket No.	06843.0050-04000	Appln. No.	09/890,729
Applicant	Steven K. YOSHINAGA		
Filing Date	August 3, 2001	Group:	1646



## U.S. PATENT DOCUMENTS

Examiner Initial*	Document Number	Issue Date	Name	Class	Sub Class	Filing Date If Appropriate

## FOREIGN PATENT DOCUMENTS

Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
WO 00/46240	08/10/2000	PCT			

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

Ling et al., "Cutting Edge: Identification of GL50, a Novel B7-Line Protein That Functionally Binds to ICOS Receptor," <i>Journal of Immunology</i> , 164(4):1653-1657 (2000).
Tafari et al., "ICOS is Essential for Effective T-Helper-cell responses," <i>Nature</i> , 409:105-109 (2001)
Wang et al., "Costimulation of T cells by B7-H2, a B7-like Molecule that Binds ICOS," <i>Blood</i> , 96(8):2808-2813 (2000).
Yoshinaga et al., "T-cell Co-stimulation Through B7RP-1 and ICOS," <i>Nature</i> , 402:827-832 (1999).
International Search Report for PCT Application No. PCT/US01/44859, mailed December 3, 2002.

Examiner	Date Considered
<p>*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>	
Form PTO 1449	Patent and Trademark Office - U.S. Department of Commerce